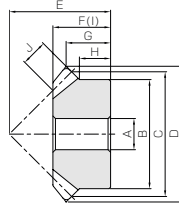
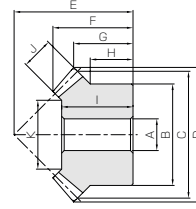




| Specifications  |                          |
|-----------------|--------------------------|
| Precision grade | JIS B 1704: 1978 grade 3 |
| Gear teeth      | Gleason                  |
| Pressure angle  | 20°                      |
| Material        | S45C                     |
| Heat treatment  | —                        |
| Tooth hardness  | (less than 194HB)        |



B2



B3

| Catalog No. | Gear ratio | Module | No. of teeth | Shape | Bore            |     | Pitch dia. | Outside dia. | Mounting distance | Total length | Crown to back length |      | Hub width |
|-------------|------------|--------|--------------|-------|-----------------|-----|------------|--------------|-------------------|--------------|----------------------|------|-----------|
|             |            |        |              |       | A <sub>H7</sub> | B   |            |              |                   |              | G                    | H    |           |
| SM2-16      | 1          | m2     | 16           | B2    | 10              | 27  | 32         | 34.83        | 30                | 19           | 15.41                | 11.5 |           |
| SM2.5-16    |            | m2.5   | 16           | B2    | 12              | 34  | 40         | 43.53        | 35                | 21           | 16.77                | 12   |           |
| SM3-16      |            | m3     | 16           | B2    | 14              | 42  | 48         | 52.24        | 40                | 23           | 18.12                | 13   |           |
| SM4-16      |            | m4     | 16           | B2    | 16              | 55  | 64         | 69.66        | 50                | 28           | 20.83                | 13.5 |           |
| SM5-16      |            | m5     | 16           | B2    | 20              | 70  | 80         | 87.07        | 65                | 37           | 28.54                | 20   |           |
| SM1-20      | 1          | m1     | 20           | B3    | 6               | 16  | 20         | 21.41        | 20                | 13.94        | 10.71                | 8    |           |
| SM1.25-20   |            | m1.25  | 20           | B3    | 8               | 22  | 25         | 26.77        | 23                | 15.27        | 11.38                | 9    |           |
| SM1.5-20    |            | m1.5   | 20           | B3    | 8               | 26  | 30         | 32.12        | 30                | 21.24        | 16.06                | 13   |           |
| SM2-20      |            | m2     | 20           | B3    | 12              | 34  | 40         | 42.83        | 37                | 24.89        | 18.41                | 14   |           |
| SM2.5-20    |            | m2.5   | 20           | B3    | 14              | 42  | 50         | 53.54        | 48                | 32.54        | 24.77                | 19   |           |
| SM3-20      | 1          | m3     | 20           | B3    | 16              | 50  | 60         | 64.24        | 58                | 39.84        | 30.12                | 23   |           |
| SM3.5-20    |            | m3.5   | 20           | B3    | 20              | 60  | 70         | 74.95        | 65                | 44.13        | 32.47                | 25   |           |
| SM4-20      |            | m4     | 20           | B3    | 20              | 64  | 80         | 85.65        | 75                | 50.78        | 37.83                | 27   |           |
| SM5-20      |            | m5     | 20           | B3    | 25              | 80  | 100        | 107.07       | 90                | 60.38        | 43.54                | 30   |           |
| SM6-20      |            | m6     | 20           | B3    | 28              | 100 | 120        | 128.48       | 104               | 67.67        | 48.24                | 34   |           |
| SM8-20      | m8         | 20     | B3           | 30    | 130             | 160 | 171.31     | 125          | 73.33             | 50.66        | 30                   |      |           |
| SM1-25      | 1          | m1     | 25           | B3    | 6               | 20  | 25         | 26.41        | 23                | 15.16        | 11.21                | 8    |           |
| SM1.25-25   |            | m1.25  | 25           | B3    | 8               | 25  | 31.25      | 33.02        | 28                | 17.88        | 13.26                | 9.25 |           |
| SM1.5-25    |            | m1.5   | 25           | B3    | 10              | 30  | 37.5       | 39.62        | 34                | 22.25        | 16.31                | 11.5 |           |
| SM2-25      |            | m2     | 25           | B3    | 12              | 40  | 50         | 52.83        | 40                | 24.33        | 16.41                | 10   |           |
| SM2.5-25    |            | m2.5   | 25           | B3    | 16              | 50  | 62.5       | 66.04        | 50                | 30.41        | 20.52                | 12.5 |           |
| SM3-25      | 1          | m3     | 25           | B3    | 20              | 60  | 75         | 79.24        | 60                | 37.81        | 24.62                | 15   |           |
| SM3.5-25    |            | m3.5   | 25           | B3    | 25              | 70  | 87.5       | 92.45        | 70                | 43.23        | 28.72                | 17.5 |           |
| SM4-25      |            | m4     | 25           | B3    | 28              | 80  | 100        | 105.66       | 80                | 49.32        | 32.83                | 20   |           |
| SM5-25      |            | m5     | 25           | B3    | 28              | 100 | 125        | 132.07       | 100               | 60.82        | 41.04                | 25   |           |
| SM6-25      |            | m6     | 25           | B3    | 28              | 120 | 150        | 158.48       | 120               | 72.32        | 49.24                | 30   |           |
| SM1-30      | 1          | m1     | 30           | B3    | 8               | 24  | 30         | 31.41        | 28                | 17.71        | 13.71                | 10   |           |
| SM1.25-30   |            | m1.25  | 30           | B3    | 10              | 30  | 37.5       | 39.27        | 36                | 23.47        | 18.13                | 13.5 |           |
| SM1.5-30    |            | m1.5   | 30           | B3    | 10              | 36  | 45         | 47.12        | 43                | 28.24        | 21.56                | 16   |           |
| SM2-30      |            | m2     | 30           | B3    | 12              | 45  | 60         | 62.83        | 50                | 29.42        | 21.41                | 12.5 |           |
| SM2.5-30    |            | m2.5   | 30           | B3    | 16              | 60  | 75         | 78.54        | 62                | 36.28        | 26.27                | 17   |           |
| SM3-30      | 1          | m3     | 30           | B3    | 20              | 70  | 90         | 94.24        | 75                | 45.47        | 32.12                | 20   |           |
| SM3.5-30    |            | m3.5   | 30           | B3    | 25              | 90  | 105        | 109.95       | 85                | 49.66        | 34.97                | 25   |           |
| SM4-30      |            | m4     | 30           | B3    | 28              | 100 | 120        | 125.66       | 95                | 54.52        | 37.83                | 25   |           |
| SM5-30      |            | m5     | 30           | B3    | 28              | 130 | 150        | 157.07       | 120               | 68.56        | 48.54                | 35   |           |

[Caution on Product Characteristics] ① The allowable torques shown in the table are the calculated values according to the assumed usage conditions. Please see page 253 for more details.  
 ② Dimensions of the outside diameter, the overall length and crown to back length are all theoretical values, and some differences will occur due to the corner chamfering of the gear tips.

| Length of bore | Face width | Holding surface dia. | Allowable torque (N-m) |                    | Allowable torque (kgf-m) |                    | Backlash (mm) | Weight (kg) | Catalog No.   |
|----------------|------------|----------------------|------------------------|--------------------|--------------------------|--------------------|---------------|-------------|---|
|                |            |                      | Bending strength       | Surface durability | Bending strength         | Surface durability |               |             |   |
| 19             | 7          | —                    | 3.84                   | 0.33               | 0.39                     | 0.034              | 0.06~0.16     | 0.076       | SM2-16<br>SM2.5-16<br>SM3-16<br>SM4-16<br>SM5-16      |
| 21             | 9          | —                    | 7.63                   | 0.68               | 0.78                     | 0.069              | 0.07~0.17     | 0.14        |   |
| 23             | 11         | —                    | 13.3                   | 1.21               | 1.36                     | 0.12               | 0.08~0.18     | 0.22        |   |
| 28             | 14         | —                    | 30.7                   | 2.87               | 3.13                     | 0.29               | 0.12~0.27     | 0.49        |   |
| 37             | 17         | —                    | 58.9                   | 5.62               | 6.00                     | 0.57               | 0.14~0.34     | 1.03        |   |
| 12             | 5          | 9.86                 | 0.89                   | 0.084              | 0.091                    | 0.0086             | 0.03~0.13     | 0.019       | SM1-20<br>SM1.25-20<br>SM3-20<br>SM4-20<br>SM5-20     |
| 13             | 6          | 13.03                | 1.70                   | 0.16               | 0.17                     | 0.017              | 0.04~0.14     | 0.036       |   |
| 19             | 8          | 15.37                | 3.12                   | 0.30               | 0.32                     | 0.031              | 0.05~0.15     | 0.074       |   |
| 22             | 10         | 21.72                | 7.13                   | 0.72               | 0.73                     | 0.073              | 0.06~0.16     | 0.15        |   |
| 29             | 12         | 28.06                | 13.6                   | 1.41               | 1.39                     | 0.14               | 0.07~0.17     | 0.30        |   |
| 35             | 15         | 31.57                | 24.1                   | 2.54               | 2.45                     | 0.26               | 0.08~0.18     | 0.53        | SM3-20<br>SM3.5-20<br>SM4-20<br>SM5-20<br>SM6-20      |
| 40             | 18         | 39.09                | 38.8                   | 4.15               | 3.96                     | 0.42               | 0.10~0.25     | 0.82        |   |
| 45             | 20         | 43.43                | 57.0                   | 6.19               | 5.82                     | 0.63               | 0.12~0.27     | 1.15        |   |
| 54             | 26         | 54.46                | 114                    | 12.6               | 11.6                     | 1.29               | 0.14~0.34     | 2.15        |   |
| 60             | 30         | 67.15                | 191                    | 21.8               | 19.4                     | 2.22               | 0.16~0.36     | 3.68        |   |
| 62             | 35         | 95                   | 413                    | 49.6               | 42.1                     | 5.06               | 0.20~0.45     | 7.05        | SM8-20  |
| 14             | 6          | 15.03                | 1.47                   | 0.16               | 0.15                     | 0.017              | 0.03~0.13     | 0.035       | SM1-25<br>SM1.25-25<br>SM1.5-25<br>SM2-25<br>SM2.5-25 |
| 16             | 7          | 18.7                 | 2.75                   | 0.31               | 0.28                     | 0.032              | 0.04~0.14     | 0.063       |   |
| 19             | 9          | 19.54                | 4.96                   | 0.57               | 0.51                     | 0.059              | 0.05~0.15     | 0.11        |   |
| 20             | 12         | 26.06                | 11.8                   | 1.41               | 1.20                     | 0.14               | 0.06~0.16     | 0.22        |   |
| 26             | 15         | 34.57                | 23.0                   | 2.81               | 2.34                     | 0.29               | 0.07~0.17     | 0.42        |   |
| 32             | 20         | 37.43                | 42.1                   | 5.24               | 4.29                     | 0.53               | 0.08~0.18     | 0.74        | SM3-25<br>SM3.5-25<br>SM4-25<br>SM5-25<br>SM6-25      |
| 37             | 22         | 46.77                | 64.7                   | 8.19               | 6.60                     | 0.83               | 0.10~0.25     | 1.15        |   |
| 43             | 25         | 55.29                | 96.3                   | 12.4               | 9.82                     | 1.26               | 0.12~0.27     | 1.73        |   |
| 50             | 30         | 65.15                | 184                    | 24.2               | 18.7                     | 2.47               | 0.14~0.34     | 3.41        |   |
| 61             | 35         | 83                   | 309                    | 42.1               | 31.5                     | 4.29               | 0.16~0.36     | 6.03        |   |
| 16             | 6          | 19.03                | 1.99                   | 0.26               | 0.20                     | 0.026              | 0.03~0.13     | 0.057       | SM1-30<br>SM1.25-30<br>SM1.5-30<br>SM2-30<br>SM2.5-30 |
| 21             | 8          | 22.37                | 4.05                   | 0.54               | 0.41                     | 0.055              | 0.04~0.14     | 0.12        |   |
| 25             | 10         | 25.71                | 7.19                   | 0.97               | 0.73                     | 0.099              | 0.05~0.15     | 0.21        |   |
| 25             | 12         | 36.06                | 15.9                   | 2.22               | 1.62                     | 0.23               | 0.06~0.16     | 0.37        |   |
| 32             | 15         | 47.57                | 31.1                   | 4.43               | 3.17                     | 0.45               | 0.07~0.17     | 0.76        |   |
| 40             | 20         | 53.43                | 57.5                   | 8.33               | 5.87                     | 0.85               | 0.08~0.18     | 1.32        | SM3-30<br>SM3.5-30<br>SM4-30<br>SM5-30                |
| 45             | 22         | 67.77                | 88.0                   | 13.0               | 8.97                     | 1.32               | 0.10~0.25     | 2.20        |   |
| 50             | 25         | 79.29                | 131                    | 19.6               | 13.3                     | 2.00               | 0.12~0.27     | 3.09        |   |
| 62             | 30         | 99.15                | 249                    | 38.3               | 25.4                     | 3.91               | 0.14~0.34     | 6.47        |   |

[Caution on Secondary Operations] ① Please read "Caution on Performing Secondary Operations" (Page 254) when performing modifications and/or secondary operations for safety concerns. KHK Quick-Mod Gears, the KHK's system for quick modification of KHK stock gears is also available.

\* For products not categorized in our KHK Stock Gear series, custom gear production services with **short lead times** is available. For details see page 8.